Docket No.: 31175803-004001
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Mario Scurati et al.

Conf. No. 3225

Application No.: 10/663,286

Art Unit: 1744

Filed: September 16, 2003

Examiner: Nathan A. Bowers

For: INTEGRATED DEVICE FOR BIOLOGICAL ANALYSES

DECLARATION UNDER 37 C.F.R. 1.132

MS After Final
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I, Mario Scurati, declare as follows:

1. I am at least 18 years of age and am competent in all respects to make the following statements.

2. I am a co-inventor for claims 1-54 currently pending in US Patent Application No. 10/663,286.

3. I have read and understand the above-referenced application and pending claims.

4. I am a person skilled in the art of integrated devices for biological analysis. See the attached *curriculum vitae* (Exhibit 1).

5. The present invention is directed to INTEGRATED DEVICE FOR BIOLOGICAL ANALYSES.

6. One prior art cited by the Examiner is Levine (US6031286). I have read and understand Levine.

7. In my view, the technique for making buried channels taught by Levine has some drawbacks that are crucial in microfluidic devices for biochemical analyses.

8. First, the technique of Levine only allows the manufacture of very small micropipes, derived from very narrow trenches with well-defined aspect ratio and deposition conditions. The resulted channels may not be able to receive a sufficient amount of fluid to perform analysis. Trying to make buried channels from wider trenches would cause so high stress that the process could not be exploited. For example, the technique of Levine is not suitable to form 200 μm (wide) by 150 μm (deep) channels as in paragraph [0089] of the current application.

9. Second, the shape and dimension of the cross section of Levine's micropipes are hardly controllable. So, it cannot be predicted how long the fluid will travel through the microfluidic channel in response to operating a pump coupled thereto. In other words, the solution described by Levine is not compatible with precise control of fluid motion and fully automated operation, irrespective of what kind of micropump is used.

10. Hence, the micropipes of Levine are not suitable for use in microfluidic devices for biochemical analyses.

I further declare that all statements made herein of my own knowledge are true and made on information believed to be true; further that these statements were made with the knowledge that willful false statements are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code; and that such willful false statements may jeopardize the validity of any application for which it is used.

Dated: December 17, 2007

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